
SURVIVING LECTURE

A PEDAGOGICAL ALTERNATIVE

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Abstract. Lecture is the approach traditionally used to teach music theory courses. Although efficient in the delivery of large amounts of information in a short period of time, lecture lacks the effectiveness of an active learning approach. “Theory Survivor” is a unique cooperative-learning method based on the Student Teams-Achievement Divisions technique created by Robert Slavin. It combines the efficiency of lecture with the effectiveness of active learning. Using the motivational forces of group cohesion, extrinsic rewards, and positive peer pressure to its advantage, Theory Survivor provides a rich educational environment in which students thrive.

Keywords: *active and cooperative learning, lecture, music theory*

Freshman music theory is typically a course professors and students detest. Professors regard the content as obvious (to them) and therefore difficult to explain. Students find the content dull and confusing and are overwhelmed when professors lecture to cover large amounts of information in a short period of time.

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The result is an expectation on the part of the professor that students comprehend the material on first encounter, and frustration on the part of the student on the realization of this impossibility. The reality is that the fundamentals of music theory are best retained if they are learned in small increments through repeated drill practice (Rogers 2004). It is essential that this introductory material be thoroughly integrated to achieve long-term retention and enable students to apply the principles to new situations; both in

future course and career settings. Achieving these goals within the constraints of a lecture format course is a difficulty professors in other subject areas face; some of which include business studies (Wingfield and Black 2005), biology (Huxham 2005), medicine (Howard, Collins, and DiCarlo 2002), and accounting (Specht and Sandlin 1991). This article’s purpose is to demonstrate an active learning method that capitalizes on the familiarity and popularity of the *Survivor* television show to enhance both efficiency and effectiveness in a lecture course.

Background

The literature on teaching music theory at the college level focuses on curricular issues (e.g., Boatwright 1965; Imbrie 1965; Merrit 1965; Rogers 2000) with a relative absence of literature on teaching techniques. However, given the pervasive tendency of faculty to teach as they were taught, and the well-known tradition of music theory as a lecture format course, it is no surprise that most music theory professors choose lecture as their preferred technique. White (2002) confirms this by describing a philosophical approach to teaching college music theory based on cognitive learning theory. He implies a teacher-centered methodology in which the instructor is primarily responsible for the presentation of material to the student; in other words, a lecture approach.

Typically, lecture is the preferred approach to teach music theory because

of its efficiency. Music theory is a heavily content-laden course. As such, students must acquire a large body of knowledge and skill in a short period of time. This situation is exacerbated by the fact that students come into the course with a wide diversity of prior knowledge and skill, a product of the lack of prerequisites typical of most American university music programs (Livingston and Ackman 2003).

This situation is not unique to music theory. Many college courses share similar characteristics and present similar challenges. Professors may be reluctant to move away from the transmission model of teaching (referred to as the lecture approach) because it is the most “traditional” (Davis 1993) and the one in which they themselves were trained (Vega and Tayler 2005). In addition, given the amount of content and diversity of student backgrounds, lecture may seem like the most efficient approach. It should be noted, however, that efficiency is not necessarily equated with effectiveness.

Recent research examined the transition from lecture to active learning in college teaching and has provided data to support the effectiveness of various non-lecture teaching activities (Lammers and Murphy 2002). First, in communication studies, Huxam (2005) examined the use of “interactive windows” (discussions and problem-solving exercises) used within lectures and found the active learning component added a positive influence on recall and learning. In another study, Specht and Sandlin (1991) compared the effects of an experiential learning method, in which students assumed the “real-world” roles and responsibilities of lending officers, with the traditional lecture method in accounting classes. The results showed that the experiential group retained the concepts better over time than the lecture group. In one of the best approaches to active learning, Howard, Collins, and DiCarlo (2002) designed an educational game based on the television show *Survivor*. They found that applying aspects of *Survivor* to a review session on respiratory physiology created a learning environment previously unmatched in the discipline. The results of student surveys completed after the game indicated that the *Survivor* method was more popular and effective than a previous review method used in the same course.

Additionally, the components of teamwork (tribes), collaborative learning, and peer instruction inherent in the game provided a unique opportunity for students to develop the crucial social skills necessary in their future careers.

This research illuminates a “paradigm shift” in higher education. The perception is no longer that colleges provide instruction, but rather that they produce learning (Barr and Tagg 1995). Faculty who are “facilitators, rather than transmitters, of knowledge” (Vega and Taylor 2005), and utilize teaching approaches that necessitate learners to assume an “active and participatory role in the educational process” (Kane 2004, 275) are able to enhance students’ retention of concepts over time and better prepare them for their future careers (Foyle 1995; Specht and Sandlin 1991). Hence, active learning approaches within or as an alternative to the traditional lecture approach are gaining favor among faculty who are concerned with not only what they have taught, but with what their students have learned.

Active Learning

Active learning represents a pedagogical approach that combines the efficiency of lecture with the effectiveness of interaction to enhance the learning environment. Bonwell and Eison (1991) define methods promoting active learning as “instructional activities involving students in doing things and thinking about what they are doing” (1). Although active learning is a general approach, specific active-learning methods can be found in a variety of disciplines at the college level, examples of which include communications (Schwebel and Schwebel 2002), biology (McClanahan and McClanahan 2002), and mathematics (Inch 2002). Although active learning methods may vary, all share the same four basic characteristics: (1) encouragement of critical thinking; (2) responsibility for learning placed on the learner; (3) engagement in open-ended activities; and (4) organization of learning activities by the educator (Kane 2004). A spirit of cooperation is required for active learning to be efficient and effective.

Cooperative Learning

Within the broader context of the active learning approach lie the methods of coop-

erative and collaborative learning. Often these two terms are used interchangeably, but it is important to note the difference between them. Ventamiglia (1995) defines the (often unperceived) difference between cooperative and collaborative methodologies as that of the educator’s role. Whereas collaborative groups create their own direction and sources, cooperative-learning groups rely on the professor to organize learning activities and provide sources.

Although all cooperative-learning methods involve groups of students working together, descriptions of the specific components of cooperative learning vary in the literature. Johnson and Johnson (1994) define *cooperative learning* as a relationship in a group of students that requires positive interdependence, individual accountability, interpersonal skills, face-to-face promotive interaction, and reflection on the group’s function. Slavin (1988) highlights the importance of a group goal and individual accountability in cooperative learning. Although slight variations are present in the specific definitions of cooperative learning, three main characteristics emerge: (1) learning activities initiated by the educator; (2) groups working toward a goal; and (3) individual accountability. The following sections provide a unique example of a cooperative-learning method designed to move away from the traditional lecture to an active-learning approach within the context of a college music theory class. This particular example—Theory Survivor—is based on the reality television show *Survivor*.

Student Teams-Achievement Divisions: Theory Survivor

Survivor is built on the premise that teams, or “tribes,” must work together to achieve group and individual rewards. Although the ultimate goal is an individual one (to be the last person left in the game and win one million dollars), the success of the tribes as a whole and the way in which individuals interact within them ultimately affects each players’ success.

To achieve their goal, participants must engage in four major activities: (1) tribal membership; (2) challenge communication; (3) survivor challenges; (4) tribal council. The show’s producers determine tribal membership at the beginning of the

game. Grouping may be random or based on demographic criteria such as age or sex. Challenge communication relates to the way in which participants are informed of the various survivor challenges. Typically, this takes the form of a written message of some kind delivered to the tribes. Survivor challenges are contests in which tribes compete to earn rewards. These challenges consist of two basic types: (1) immunity challenges where tribes compete to win immunity from Tribal Council (and thus do not have to vote to eliminate one of their members); and (2) reward challenges where tribes compete for some other type of reward or privilege (e.g., food, supplies, special activities).

By incorporating these four activities, Theory Survivor transforms the traditional lecture format of music theory into active learning. Grouping students becomes tribal membership. The lesson is the challenge communication. Teamwork and drill practice is the survivor challenge. Individual assessment is synonymous with tribal council.

Theory Survivor exemplifies many of the characteristics of active learning through the Student Teams-Achievement Divisions (STAD) technique created by Slavin (1991). STAD has application at both the K-12 and college level and is best suited for teaching “well-defined objectives with single right answers” (Slavin 1991, 73). STAD has four major components: (1) heterogeneously grouped student teams; (2) a lesson taught by the instructor; (3) students working in teams to master the material; (4) individual quizzes to test students’ understanding. The cycle of activities (lesson, team work, quiz) typically occurs over three to five class periods.

Grouping—Tribal Membership

The first component of STAD is heterogeneously grouped teams. Students are assigned to four-member learning teams mixed in performance level, sex, and ethnicity. In Theory Survivor, elements of sex and ethnicity are not relevant and therefore are not used as grouping criteria. Students are grouped heterogeneously, but only according to performance level. Students are given a pre-test to determine their level of prior knowledge of course content and then assigned to four- to six-member

“tribes” based on their test scores. Each tribe is comprised of members of varying abilities, with the highest-scoring member designated as the leader.

Similar to the television show, the tribal metaphor in Theory Survivor is crucial. Robyn (2000) describes the word *tribe* (as opposed to *team*) as one that “draws people” and “evokes a sense of belonging” (1). At the beginning of Theory Survivor, students are asked to create a name and a flag for their tribe. Over the course of the game (several weeks), group cohesion increases as tribes work together toward the goal of winning the “fabulous prize” promised at the end.

Lesson—Challenge Communication

The second component of STAD is a lesson taught by the instructor. A typical session of Theory Survivor begins with a challenge communication—a mini-lecture—on the content to be covered in the class period. The instructor presents a limited amount of material in a concise manner. This may be followed by a brief illustration and a few examples done by the class as a whole. The tribes are assigned their “challenge” for the day when the instructor is satisfied that the students have enough information. For example, the instructor may present a mini-lecture on scales at the beginning of the class and then post a list of workbook exercises on the same topic to be completed by the tribes during the remainder of the period. The instructor is responsible for initiating the learning activity; illustrating the first characteristic of cooperative learning, while incorporating the effectiveness of lecture.

Challenge communication parallels the television show in that both present critical information toward achieving the goal. In the television show, its purpose is to notify the tribes of the impending challenge. In Theory Survivor, its purpose is to present new information and set up the learning activity.

Teamwork—Survivor Challenge

The third component of STAD is teamwork. Students work with their teammates to master the material presented in the lesson. In Theory Survivor, the tribes are assigned a “challenge” based on the content of the mini-lecture. The challenge

typically consists of exercises from the course workbook to be completed within specified time limits. The instructor assigns the exercises, but it is the responsibility of each tribe leader to execute the challenge. Each tribe must complete the exercises within the time limits (a stopwatch is used), check their answers against a key, and calculate individual and team scores. As the goal is for each tribe to achieve the highest average score possible, it is to their advantage to work together to ensure the individual success of each member. The second characteristic of cooperative learning, groups working toward a goal, is illustrated by this component of Theory Survivor.

The television show and Theory Survivor require immediate interaction of individuals. The better they work together as a team, the greater the likelihood of them winning a reward (*Survivor*) or obtaining higher assignment scores (Theory Survivor).

Assessment—Tribal Council

The final component of STAD is a quiz to assess each student’s comprehension. The quiz scores are compared to students’ past averages and points are awarded to each team based on the degree to which each student met or exceeded his or her earlier performances. Theory Survivor also uses individual assessment to determine team rewards, although in a slightly different way. After a challenge is completed, tribes use a key (provided by the instructor) to check their answers. Each member calculates his or her score and expresses it as a percentage. All members’ scores are added together and divided by the number of people present, resulting in a total score for the tribe. The higher each individual score, the higher the tribe score; providing motivation for each member to do his or her best. This also serves the purpose of adding an element of individual accountability, which is the third characteristic of cooperative learning.

In *Survivor*, tribes must participate in a “tribal council” where a vote is held to eliminate one member. The tribe assesses the contributions of each member and individuals are held accountable for their actions. The tribe votes to eliminate the weakest member, thereby increasing its collective strength. Although students are not voted off tribes through the Theory

Survivor assessment process, personal pride, peer pressure, and a sense of belonging motivate individuals to do their best.

Theory Survivor, then, blends the best of educational practices. It provides the efficiency of lecture and the effectiveness of interactive learning. From those two major teaching strategies, the learning environment can be enhanced. However, before faculty implement an active learning approach such as the *Survivor* method, they should consider certain pedagogical implications.

performance and standing. If equity is not established, teams perceive that they do not have an equal chance at “winning,” and are less motivated to succeed. This effectively negates the educational benefit of the activity.

Third, the challenge communication must be clear and brief. Mini-lectures must be directed toward the assignment of the day and contain clear objectives. J. R. Davis (1993) provides suggestions for delivering clear explanations, including: (1) providing students with a context for

tic include chemistry, physics, anatomy, foreign language, biology, and statistics, to name a few. In short, any subject that necessitates the assimilation of a relatively large amount of unfamiliar information in a relatively short time frame is a candidate for this method.

In the instance of Theory Survivor, the method provided learning conditions that were more efficient and more effective than the traditional approach of lecture to freshman music theory. Compared with previous classes taught by the same instructor, it was observed that Theory Survivor students (1) were more actively engaged during class; (2) knew their peers better and demonstrated a greater sense of responsibility toward them; (3) had a more positive attitude toward the subject; and (4) were able to quickly recall fundamental concepts and apply them to new situations. In addition, students that had participated in Theory Survivor in their freshman year demonstrated retention of these fundamental concepts beyond the span of the game and the course. The instructor of the sophomore theory class reported that the “Theory Survivor alumni” exhibited a markedly more mature disposition and a greater level of confidence in the course than students not taught using this method. This maturity was manifested by the students’ ability to apply basic musical concepts to advanced composition and analysis exercises, demonstrating a greater level of literacy with the language of the discipline.

As colleges attempt to increase learning by turning their attention to non-traditional instructional practices, various non-lecture teaching activities are becoming more important (Lammers and Murphy 2002). Based on active-learning results from music, business studies (Wingfield and Black 2005), biology (Huxham 2005), medicine (Howard, Collins, and DiCarlo 2002), and accounting (Specht and Sandlin 1991), the next stage is to assess, more and better, the efficiency and effectiveness of these active learning approaches to traditionally lecture subjects. Although the aforementioned learning evidence provided from Theory Survivor is promising, greater rigor should be applied to the assessment process for it, as well as all active-learning environments.

THE THEORY SURVIVOR METHOD DESCRIBED HERE HAS POTENTIAL FOR APPLICATION TO A VARIETY OF DISCIPLINES. MUSIC THEORY IS SIMILAR TO OTHER SUBJECTS BECAUSE IT IS COMPRISED OF A UNIQUE “LANGUAGE” OF FUNDAMENTAL CONCEPTS WITH WHICH STUDENTS MUST BECOME FLUENT QUICKLY.

Pedagogical Implications

The success of Theory Survivor depends on a few key factors. To provide a similar experience, instructors must carefully consider the following points concerning the design of an active-learning approach.

First, the activity must appeal to the students. Using the format of a popular television show provides a familiar context with which students can easily relate (Kaupins 2005). In addition, setting up a competitive atmosphere and offering a “fabulous prize” (in addition to grades) as a reward provide motivation for groups to work cooperatively to achieve success. This type of motivation is imperative in any cooperative learning method and instructors need to set up the activity carefully to maximize its benefits.

Second, team equity is important. Using a pre-test or other assessment method to determine team membership assures an equal distribution of talent and a perception of fairness at the outset of the activity. If teams perceive that they are starting the game on equal terms, then they will work harder to improve their

the new information; (2) introducing new terminology; and (3) using repetition and examples to focus on important points. Understanding the concept and developing accuracy through practice are essential components of the challenge communication component in Theory Survivor and also illustrate the stages of fundamentals study described by Rogers (2004).

Finally, the contributions of individuals to the team must be recognized and cast in a positive light. Peer pressure can act as a motivational force, but it is important that weaker team members not be made to feel inferior. One way to accomplish this within a competitive environment is to provide an extrinsic reward in addition to grades. When students know that their grade is not going to be negatively affected by the outcome of the “game,” they feel more comfortable participating.

The Theory Survivor method described here has potential for application to a variety of disciplines. Music theory is similar to other subjects because it is comprised of a unique “language” of fundamental concepts with which students must become fluent quickly. Examples of other subjects that share this characteris-

Conclusion

Surviving freshman music theory is not typically an easy task for students or their professors. The traditionally lecture-based format of the course, combined with the varied levels of knowledge and skill with which students enter, and the amount of material they are expected to learn, often works against students' best efforts to succeed. To be successful, a pedagogical approach for teaching music theory (and other courses with similar characteristics) needs to be efficient and effective. Theory Survivor provides an example of a unique cooperative-learning method incorporating the efficiency of lecture and the effectiveness of an active-learning approach. This method's success lies in its innate popular appeal and capitalization on group cohesion, extrinsic rewards, and positive peer pressure as motivational factors. Contrary to its name, Theory Survivor does not merely ensure that students "survive" the course, but rather produces a rich educational environment within which they can thrive as well.

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